Conforms to ISO/IEC 18000-3 (ISO/IEC 15693) Standards

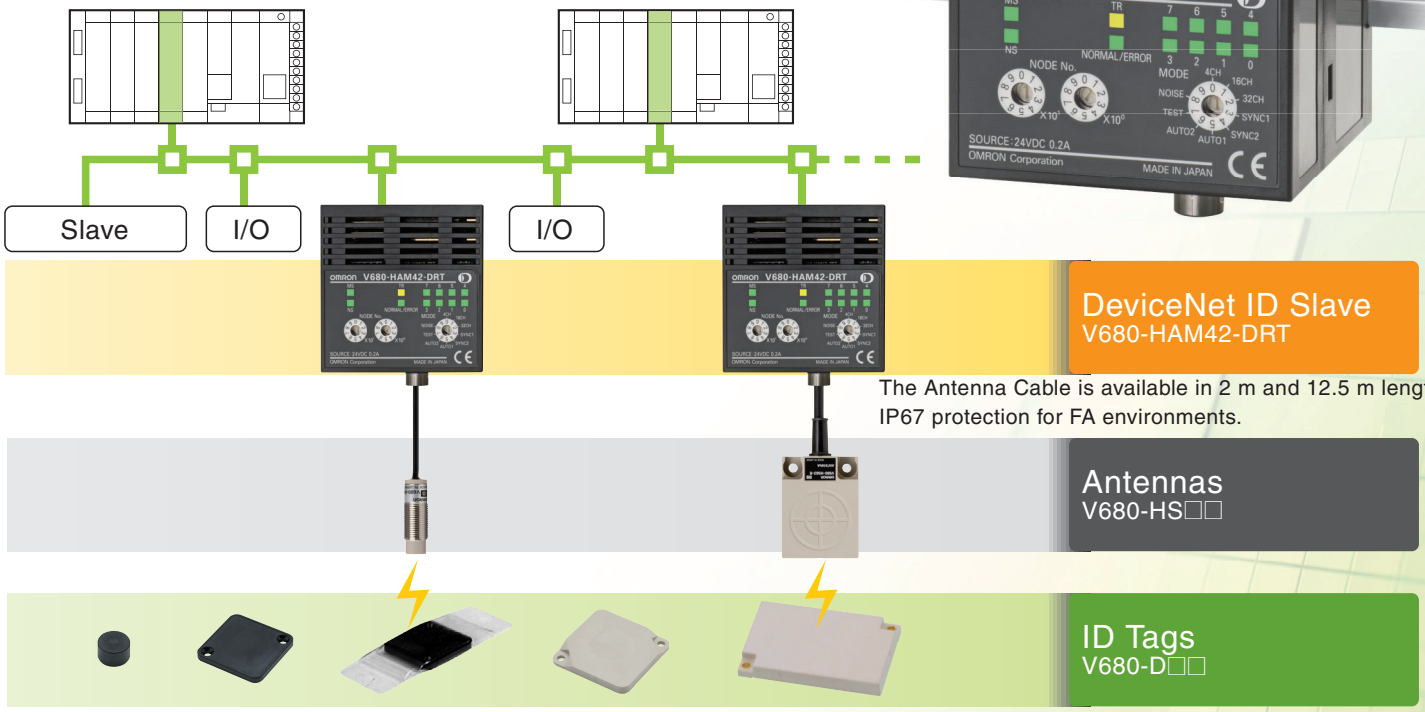
V680 RFID DeviceNet ID Slave

V680-HAM42-DRT

OMRON

DeviceNet™

Read and write up to 58 bytes of data. DeviceNet makes information management at the production site simpler, more flexible, and more open.



Lineup includes 1K, 2K, 8K, and 32K ID Tags.
The wide lineup includes super-compact ID Tags with an 8-mm diameter that can be embedded in metal, as well as long-life ID Tags capable of 10 billion accesses.

Access Up to 58 Bytes of Data. Improve Communications Performance with the Master Unit.

- Operating modes include 4-byte, 26-byte, and 58-byte Access Modes, and a Noise Measurement Mode. You get improved tact time, and simplified startup and maintenance.
- V600-HAM42-DRT-compatible Access Modes allow the application of existing programs.
- A special function greatly reduces communications data with the Master Unit of the PLC for even easier application.

Powerful Functions in a Compact Size.

- The compact size of 65 × 65 × 65 mm reduces installation space.
- The DeviceNet ID Slave can communicate with ID Tags and Antennas that comply with ISO/IEC 18000-3 (ISO/IEC 15693) to enable a wide variety of applications.
- The V680 Antenna comes with a maximum cable length of 12.5 m, allowing it to be installed in locations away from the control panel.

Take the V680 Overseas.

- The V680 complies with international standards and radio wave regulations. Radio wave regulation compliance is applicable to Japan, Europe, the U.S.A., and Canada. Radio wave regulation compliance for China, Taiwan, South Korea, and Southeast Asia is pending.

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Ordering Information

Appearance	Size	Model
	65 × 65 × 65 mm (excluding protrusions)	**V680-HAM42-DRT** NEW

Note: For applicable V680 Antennas and ID Tags and for more information on the V680-HAM42-DRT, refer to the *Datasheet* (Cat. No.: Q160) and the *User's Manual* (Cat. No.: Z278).

Ratings and Performance

Item / Model	V680-HAM42-DRT
Connectable Antennas	One channel (V680-HS□□)
Supply voltage	24 VDC (–15% to 10%) including 10% ripple (p-p)
Power consumption	4 W max. (Current consumption of 200 mA max. at power supply voltage of 24 VDC)
Ambient operating temperature	–10 to 55°C (with no icing)
Ambient storage temperature	–25 to 65°C (with no icing)
Ambient operating humidity	25% to 85% (with no condensation; ambient operating temperature is 40°C max. at humidity of 85%)
Insulation resistance	20 MΩ min. (at 500 VDC) between all terminals excluding the ground terminal and the case
Dielectric strength	1,000 VAC (50/60 Hz) for 1 minute between all terminals excluding the ground terminal and the case
Vibration resistance	10 to 150 Hz, 0.2-mm double amplitude at 15 m/s^2 acceleration with 10 sweeps in X, Y and Z directions for 8 minutes each
Shock resistance	150 m/s^2 in X, Y, and Z directions 3 times each (18 times in total)
Degree of protection	IEC 60529, IP20
Materials	Polycarbonate (PC) resin, ABS resin
Weight	Approx. 150 g
Mounting	DIN Track

Note: For details, refer to the *User's Manual* (Cat. No. Z278).

Operating Modes

Symbol	Description	Maximum number of bytes accessible in ID Tag	Words allocated in Master Unit
4CH	4-byte Access Mode	Read: 4 bytes/Write: 4 bytes	IN: 4 words OUT: 4 words (PLC inputs: 64 points, PLC outputs: 64 points)
16CH	26-byte Access Mode	Read: 26 bytes/Write: 26 bytes	IN: 16 words OUT: 16 words (PLC inputs: 256 points, PLC outputs: 256 points)
32CH	58-byte Access Mode	Read: 58 bytes/Write: 58 bytes	IN: 32 words OUT: 32 words (PLC inputs: 512 points, PLC outputs: 512 points)

Note 1. The V600-compatible Trigger and Auto Modes can be used with the same I/O settings and control methods that are used with the V600-HAM42-DRT.
2. For details, refer to the *User's Manual* (Cat. No. Z278).

Commands (4-byte, 26-byte, 58-byte Access Mode)

Reading	READ	Data in the ID Tag memory is read by specifying the memory address and the number of bytes to process. (The number of bytes can be specified using the Access Mode.)
Writing	WRITE	Data is written to the ID Tag by specifying the memory address, number of bytes to process, and the data. (The number of bytes can be specified using the Access Mode.)
	BIT SET	Previously specified bits (i.e., bits that are turned ON) are turned ON in the ID Tag address specified for BIT SET.
	BIT CLEAR	Previously specified bits (i.e., bits that are turned ON) are turned OFF in the ID Tag address specified for BIT CLEAR.
	DATA FILL	The specified continuous memory addresses in the ID Tag are filled with the same data.

Transmission Distance Specifications

(Unit: mm)

ID Tag	Amplifier	V680-HAM42-DRT			
	Antenna	V680-HS51	V680-HS52	V680-HS63	V680-HS65
1-Kbyte memory	V680-D1KP52MT	Read: 0.5 to 6.5 mm (axial deviation ±2) Write: 0.5 to 6.0 mm (axial deviation ±2)	Read: 0.5 to 9.0 mm (axial deviation ±2) Write: 0.5 to 8.5 mm (axial deviation ±2)	Read: 0.5 to 12.0 mm (axial deviation ±2) Write: 0.5 to 9.5 mm (axial deviation ±2)	---
	V680-D1KP52MT (embedded in metallic surface: steel)	Read: 0.5 to 3.5 mm (axial deviation ±2) Write: 0.5 to 3.0 mm (axial deviation ±2)	Read: 0.5 to 4.5 mm (axial deviation ±2) Write: 0.5 to 4.0 mm (axial deviation ±2)	---	
	V680-D1KP66T	---	Read/Write: 1.0 to 17.0 mm (axial deviation ±2)	Read: 5.0 to 30.0 mm (axial deviation ±10) Write: 5.0 to 25.0 mm (axial deviation ±10)	Read: 5.0 to 47.0 mm (axial deviation ±10) Write: 5.0 to 42.0 mm (axial deviation ±10)
	V680-D1KP66MT (flush-mounted on metallic surface: steel)	---	Read: 1.0 to 16.0 mm (axial deviation ±2) Write: 1.0 to 14.0 mm (axial deviation ±2)	Read: 5.0 to 25.0 mm (axial deviation ±10) Write: 5.0 to 20.0 mm (axial deviation ±10)	Read: 5.0 to 25.0 mm (axial deviation ±10) Write: 5.0 to 20.0 mm (axial deviation ±10)
	V680-D1KP66T-SP	---	Read/Write: 1.0 to 15.0 mm (axial deviation ±2)	Read: 5.0 to 25.0 mm (axial deviation ±10) Write: 5.0 to 20.0 mm (axial deviation ±10)	Read: 5.0 to 42.0 mm (axial deviation ±10) Write: 5.0 to 37.0 mm (axial deviation ±10)
2-Kbyte memory	V680-D2KF52M	Read/Write: 0.5 to 5.5 mm (axial deviation ±2)	Read/Write: 0.5 to 8.0 mm (axial deviation ±2)	Read/Write: 0.5 to 9.5 mm (axial deviation ±10)	---
	V680-D2KF52M (embedded in metallic surface: steel)	Read/Write: 0.5 to 3.5 mm (axial deviation ±2)	Read/Write: 0.5 to 3.0 mm (axial deviation ±2)	---	
	V680-D2KF67	---	Read/Write: 1.0 to 17.0 mm (axial deviation ±2)	Read/Write: 7.0 to 30.0 mm (axial deviation ±10)	Read/Write: 5.0 to 42.0 mm (axial deviation ±10)
	V680-D2KF67M (flush-mounted on metallic surface: steel)		Read/Write: 1.0 to 16.0 mm (axial deviation ±2)	Read/Write: 6.0 to 25.0 mm (axial deviation ±10)	Read/Write: 5.0 to 25.0 mm (axial deviation ±10)
8-/32-Kbyte memory	V680-D8KF68/-D32KF68	---	---	Read/Write: 5.0 to 45.0 mm (axial deviation ±10)	Read/Write: 5.0 to 75.0 mm (axial deviation ±10)
	V680-D8KF68/-D32KF68 (Special attachment provided; flush-mounted on metallic surface: steel)			Read/Write: 5.0 to 35.0 mm (axial deviation ±10)	Read/Write: 5.0 to 55.0 mm (axial deviation ±10)

This document provides information mainly for selecting suitable models. Please read the *User's Manual* (Cat. No. Z278) carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

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